

Application No. 10/617,681

TMI-5004-08

IN THE DRAWING

Please replace the sheets bearing Figs. 2 and 3 with the enclosed Replacement Sheets, amended to add a "Prior Art" label in accordance with the Examiner's requirement. A Transmittal of Corrected Drawing Sheets is being filed concurrently herewith.

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REMARKS

The Applicants request reconsideration of the rejection.

Claims 56-65 are now pending.

On page 2, the Office Action notes that foreign applications No. 2-183936 and 2-260439 have not been received. In reply, the Applicants note that receipt of these documents were confirmed filed in the file history of Application No. 07/725,672 on January 19, 1993.

The Examiner requires Figs. 2-3, 12, and 14 to be labeled "Prior Art". In reply, the Applicants submit herewith Replacement Sheets for Figs. 2 and 3 labeling them as prior art, but decline to label Figs. 12 and 14 in this way because these figures do not show only prior art. More particularly, Figs. 12(a) to 12(c) show an effect of the present invention disclosed in the present specification (see, e.g., page 30, line 11 through page 31, line 2), and Fig. 14 shows a data flow that pertains to the invention of Figs. 12 and 15, for example (see, e.g., page 26, line 24 through page 27, line 8). Accordingly, because these figures do not solely show prior art, it would be inappropriate to label them as prior art.

Claims 56-59 were rejected under the judicially-created doctrine of obviousness-type double patenting, as being unpatentable over claims 1-2 and 33-34, respectively, of US 6,286,108, and claims 56-57 were rejected under this doctrine as being unpatentable over claims 10-11 of US 6,397,294. In

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light of the amendments to independent claims 56 and 58 specifying the starting up of the spindle motors in "groups", the Applicants respectfully request reconsideration.

Claims 56-59 were rejected under 35 USC §112, second paragraph, as being indefinite for reciting "some". In reply, although the Applicants believe that the term is sufficiently clear to the person of ordinary skill in the art, the claims have been amended to add clarity to the term without changing the scope thereof.

Claims 56-59 were rejected under 35 USC §102(e) as being unpatentable over Dougherty, US 4,967,304 (Dougherty). The Applicants traverse as follows.

Independent claims 56 and 58 are directed to a method and system, respectively, by which the amount of electrical current required to start up and maintain steady-state operation of a plurality of disk drive spindle motors is reduced in comparison with the prior art. Specifically, by grouping the spindle motors, a first start-up group of less than all of the motors (but greater than one motor) are supplied with start-up current, and subsequently a second group (of at least one motor) receives start-up current.

In citing Dougherty, the Office Action relies primarily on Fig. 2 as allegedly disclosing the starting and operating motor performance for plural motors. In fact, Fig. 2 shows the recommended motor performance curve 13 and a tailored

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motor protection curve 14 for the same motor. In particular, curve 13 shows the idealized trip-time curve for a motor, expressed in multiples of rated current, such as would be provided by the motor manufacturer. Note that for overload protection at low currents, a longer time is permitted before providing circuit interruption (not start-up), whereas higher multiples bring successively faster interruptions in accordance with the multiple of the rated current. On the other hand, curve 14 shows a tailored protection curve that resembles the idealized curve, but describes an optimized characteristic that is obtained for specified points according to a logarithmic interpolation algorithm. As a result, according to the patent, adequate motor protection is provided without interruption during motor start-up.

Thus, a fundamental difference between the claimed invention and Dougherty is evident; namely, Dougherty describes a per-motor protection scheme that is unrelated to the grouped start-up scheme of the claimed invention. Even if Dougherty were to be applied to a system of plural motors, the person of ordinary skill in the art would apply Dougherty's Fig. 2 to each motor individually and simultaneously, with no consideration given to starting up plural motors in a first group, followed by starting one or more motors in a second group, as required by the claims. Consequently, according to

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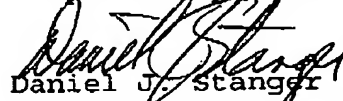
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Dougherty, the advantages of the claimed invention cannot be achieved.

In closing, the Applicants note that the Examiner has crossed out documents AL, AM, and AR on the Form PTO-1449 (Sheet 1 of 2) filed with the application papers on July 14, 2003, with the notation "Never appeared in IFW." In fact, these documents were submitted in the prosecution of the prior applications to which this application claims priority benefits under 35 USC §120, and as such should be initialed as part of the art of record. The Applicants submit herewith a substitute of this Form and request the Examiner to initial and return it, as an indication that the documents have, indeed, been considered and to ensure that any patent issuing from this application lists these documents as related art. If the Examiner requires courtesy copies of the documents, the Applicants will provide them upon request.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,



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